

# Notice of Allowability

Application No.

10/516,821

Examiner

Hoang Tran

Applicant(s)

TAKAHASHI, MORIO

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/26/2007.
2. ☒ The allowed claim(s) is/are 1,3-5,10-24,29-43 and 45.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 12/04/2006, 03/03/05,
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

Nineteen (19) sheets of formal drawings were filed on 12/07/2004 and have been accepted by the examiner.

### ***Specification***

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Allowable Subject Matter***

Claims 1, 3-5, 10-24, 29-43, and 45 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Claims 1, 3-5, 10-24, 29-43, and 45 has allowable subject matter.

In regards to Claim 1: Prior art is silent to a sacrifice layer formed of a material with an etching rate larger than that of said substrate, wherein the material has a thermal conductivity smaller than that of said substrate, and wherein is formed of glass doped with phosphorus, and said clad layer is formed of with phosphorus, and said clad layer is formed of glass doped with boron and phosphorus, said clad layer is formed on said substrate through a sacrifice layer. Claims 3, 4, 5, 10, 11, 12, 32 depends on Claim 1.

In regards to Claim 13, 16, and 30 Prior art is silent to a core layer provided inside said bridge section clad layer and a pole in a space between said bridge section optical waveguide and said substrate to support said bridge section clad layer, said pole having a width smaller than a width of said bridge section clad layer, said supporting section is formed of material of an etching rate larger than that of said substrate. Claims

Art Unit: 2874

14,15,17,18,19,20,21, and 45 depend on Claim 13. Claims 34,35,38,39,40 depends on Claim 16. Claims 36-38, 41, and 42 depends on Claim 30.

In regards to Claim 22, Prior art is silent forming a lower clad layer to cover said sacrifice layer, said lower clad layer having an etching rate smaller than that of said sacrifice layer and removing at least a portion of said sacrifice layer through said grooves, wherein said removing comprises: removing said sacrifice layer to leave a portion for supporting said lower clad layer in a portion corresponding to the said predetermined portion. The prior art is silent to both the steps described above and the order in which they are outlined in Claim 22. Claim 29 depends on Claim 22.

In regards to Claim 23: Prior art is silent to forming a first lower clad layer to cover said sacrifice layer, said first lower clad layer being formed of glass doped with boron and phosphorus and having an etching rate smaller than said sacrifice layer; forming grooves on both sides of said heater in a portion corresponding to said predetermined portion to pass through said upper clad layer and said lower clad layer to said sacrifice layer and removing at least a portion of said sacrifice layer through said grooves. The Prior art of record site in PTO-892 both silent to steps outlined above and the order as claimed in Claim 23. Claims 24 and 45 depends on Claim 23.

For the reasons above either alone or in combination the claims as present in Claims 1, 3-5,10-24, 29-43, and 45 are allowed.

### ***Conclusion***

Art Unit: 2874

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Tran whose telephone number is 571-272-5049. The examiner can normally be reached on 9:00AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ht

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September 14, 2007

/Sung Pak/  
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Application/Control Number: 10/516,821

Page 5

Art Unit: 2874

Primary Examiner  
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